

**What is Claimed is:**

1           1.       A compensated amplifier, for amplifying an input signal applied to an  
2 input node to provide an output signal at an amplifier output node, comprising:  
3           a first amplifier stage having an internal node as an input thereto and  
4           having a first stage output node;  
5           a second amplifier stage coupled to said first amplifier stage, having  
6           said input node as an input thereto and providing said output signal at said  
7           amplifier output node; and  
8           a capacitor coupled between said output node and said internal node,

1           2.       A compensated amplifier according to Claim 1, wherein said second  
2 amplifier stage is coupled to said first amplifier stage such that said first stage output  
3 node is common with said amplifier output node.

1           3.       A compensated amplifier according to Claim 1, wherein said second  
2 amplifier stage is coupled to said first amplifier stage such that said first stage output  
3 node is connected to said input node.

1           4.       A compensated amplifier according to Claim 1, wherein said capacitor  
2 is connected such that a left-hand-plane zero is provided in said compensated  
3 amplifier.

1           5.       A compensated amplifier according to Claim 4, wherein said left-  
2 hand-plane zero is selected so as to optimize compensation for said compensated  
3 amplifier.

1           6.       A compensated amplifier according to Claim 1, wherein said first  
2 amplifier stage comprises a bipolar transistor current mirror.

1 7. A compensated amplifier according to Claim 1, wherein, in operation,  
2 capacitive current flows through said capacitor, and said capacitive current is sensed  
3 at said internal node and amplified by said first amplifier stage.

1 8. A compensated amplifier according to Claim 7, wherein said first  
2 amplifier stage comprises a diode connected transistor and a ratioed transistor  
3 connected together forming a current mirror, and wherein said diode connected  
4 transistor senses said capacitive current at said internal node and said ratioed  
5 transistor amplifies said capacitive current.

9. A Miller-compensated amplifier, for amplifying an input signal  
applied to an amplifier input node to provide an output signal at an amplifier output  
node, comprising:

4 a first amplifier stage having an internal node as an input thereto, and  
5 having a first stage output node;

6 a second amplifier stage having said amplifier input node as an input  
7 thereto, and having a second stage output node;

8 a third amplifier stage having a third stage input node coupled to said  
9 first stage output node and to said second stage output node, and providing  
10 said output signal at said amplifier output node; and

11 a capacitor coupled between said amplifier output node and said  
12 internal node.

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